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A FOLLOW-UP STUDY OF HIGH SCHOOL
SHORTHAND STUDENTS

by

Leo Shirey Dawson

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DEPARTMENT OF SECONDARY EDUCATION

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A Follow-Up Study of High School Shorthand Students," submitted by Leo Shirey Dawson in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

The increased emphasis on vocational education in recent years has been a major cause of a substantial increase in the number of Alberta high schools offering shorthand and the number of high school students enrolling in shorthand. The purpose of this study was to investigate students' reasons for electing shorthand in high school and to identify the advantages, if any, accruing to a beginning office employee who has a background in high school shorthand.

Data were obtained from the students' record cards at the Alberta Department of Education and from a questionnaire sent to former high school students who had worked in offices for approximately eleven months. The population, consisting of all 1962-1963 shorthand students in Alberta public and separate high schools who left school in June, 1963, was divided into three groups; graduates with three years of high school shorthand, non-graduates with three years of high school shorthand, and graduates with two years of high school shorthand. Responses to each item of the questionnaire were summarized in terms of averages and percentages. High school shorthand marks were used as an indication of shorthand skill.

The results of the study indicated that most students elected shorthand because of a desire to obtain a better and more interesting job; some students elected shorthand on the advice of a teacher or guidance counsellor; others elected shorthand because it was a required course in the program selected.

Shorthand was used on the job by 53 per cent of the respondents. Average salaries for these respondents were higher than for respondents who did not use shorthand on the job. The percentage of respondents using shorthand on the job was positively related to the number of shorthand courses taken in high school, the degree of skill attained in shorthand as indicated by marks in shorthand, and the general level of high school education attained as indicated by graduation or non-graduation from high school.

The findings of the study indicated that shorthand was used exclusively for transcription purposes by 37.4 per cent of the respondents. High school shorthand preparation was reported to be adequate by most beginning stenographers.

ACKNOWLEDGEMENTS

The writer acknowledges his indebtedness to Dr. Geraldine Farmer, supervisor, for her generous counsel and guidance during the preparation of this study.

Appreciation is extended to Dr. F. Enns and Mr. R. C. Ohlsen for their helpful criticisms and comments.

Most sincere thanks are expressed to the respondents of this study, beginning office employees, who gave information so willingly, and to the officials of the Department of Education who approved and arranged access to student files.

Finally, the writer wishes to thank his wife, Martha, and his family for their patience and encouragement.

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CHAPTER I

INTRODUCTION AND PURPOSE OF THE STUDY

Enrollments in shorthand in Alberta have been increasing. During the school year, 1962-1963, 2,454 students enrolled in Short-hand 10 (beginning shorthand) in Alberta;¹ during the school year 1963-1964, 3,069 students were enrolled.² The increase in enrollment was therefore approximately 25 per cent. Such a substantial increase in enrollment in a course primarily designed for vocational use warrants an investigation of the value and usefulness of high school shorthand. This study attempts to investigate students' reasons for electing shorthand in high school and to identify the advantages, if any, accruing to students who have completed courses in shorthand.

BACKGROUND OF THE STUDY

Shorthand is defined in the Thorndike dictionary³ as "a method of rapid handwriting using extremely simple strokes in place of letters, often with other abbreviating devices." The Funk & Wagnalls dictionary⁴

¹Alberta Department of Education, Fifty-Eighth Annual Report: 1963 (Edmonton: Queen's Printer, 1964), p. 196.

²Alberta Department of Education, Fifty-Ninth Annual Report: 1964 (Edmonton: Queen's Printer, 1965), p. 186.

³Edward L. Thorndike and Leonard Bloomfield, The American College Dictionary (New York: Harper & Brothers Publishers, 1953), p. 1120.

⁴Funk & Wagnalls, Standard College Dictionary, Canadian Edition (Toronto: Longmans Canada Limited, 1963), p. 1242.

defines shorthand as "any system of rapid writing; usually employing symbols other than letters, words, etc.: distinguished from longhand." Both definitions imply that symbols or simple strokes are common to shorthand systems. However, systems are now in common use which use letters of the alphabet in place of symbols or simple strokes. Wagoner⁵ refers to these latter systems as "abbreviated longhand systems, ABC systems, longhand adaptations, or Alphabetic systems," and adds that "longhand adaptations might be considered as substitutes for shorthand and would include machine shorthand systems as well as Speedwriting and like systems."

Abbreviated longhand systems are sometimes used in the office, but these systems are not usually characterized by high-speed writing. According to Wagoner,⁶ "speeds of above 100 words per minute for sustained periods are seldom claimed for alphabetic systems and even less attained." It is usual for writers of symbol shorthand systems to attain speeds of 100 words a minute or more, thus enabling the writer to use the skill both in offices and in the courts. Machine shorthand is also rapid, but has limitations due to the expense and inconvenience of the machine. For purposes of this study, the term "shorthand" refers to symbol shorthand, either Pitman or Gregg.

⁵George A. Wagoner, "Abbreviated Longhand Systems," Business Education Forum, XIV (April, 1960), p. 24.

⁶Ibid.

Shorthand in Alberta Schools

At the present time, most Alberta high schools offer Shorthand 10, Shorthand 20, and Shorthand 30 to students who have chosen the stenographic pattern in a business education program. Normally, students take one course per year for three years beginning in Grade X. In some schools, however, students are permitted to enroll in both Shorthand 10 and Shorthand 20 in Grade XI; in other schools, students who have taken Shorthand 10 in Grade XI are permitted to enroll in Shorthand 20 and Shorthand 30 in Grade XII. Occasionally, limited offerings in some schools and changes in high school programs restrict students to two courses in shorthand which are usually taken during the last two years of high school.

Although some authorities in business education propose for shorthand both a personal and a vocational objective, most authorities recognize only the vocational objective. In an attempt to determine the primary objective of symbol shorthand programs in the public secondary school, Gratz⁷ interviewed 38 leading business educators in the United States. Gratz reported that 81.5 per cent indicated that the objective was vocational; 18.5 per cent indicated that the objective was personal and vocational; no respondents indicated that the objective was solely personal

⁷Gerre E. Gratz, Major Issues in Business Education, (Monograph 106. Cincinnati: South-Western Publishing Company, 1962), p. 64.

NEED FOR THE STUDY

There has been a recent increased emphasis on vocational education in Canada because of the demands of industry and the impetus provided by the Federal Government through the Technical and Vocational Assistance Act (1960).⁸ Monies provided by this Act have made possible the building and equipping of vocational schools throughout Canada and have created the necessity for expanded curricula. The rapid growth of vocational education further supports the existing need for evaluating the effectiveness of the courses in preparing students for their chosen occupation. This is clearly stated in the Canada Yearbook:⁹

The development of an educational-training system which takes into consideration the unfolding requirements of a changing economy for trained people should be based on continuing research activities to identify these needs, to throw light on their consequences for training policies and programs, and to assess the effectiveness of various kinds of training.

Increasing numbers of high schools are offering shorthand in their business education departments. The Alberta Department of Education's Fifty-Eighth Annual Report¹⁰ indicates that 79 schools in Alberta offered Shorthand 10 during the 1962-1963 school year. The Fifty-Ninth Annual Report¹¹ of the 1963-1964 school year indicates that

⁸Dean H. Goard, "Current Developments in Canadian Technical and Vocational Education," Phi Delta Kappan, XLVI (April, 1965), p. 396.

⁹Dominion Bureau of Statistics, Government of Canada, Canada Yearbook, (Ottawa: Queen's Printer, 1964), p. 743.

¹⁰Alberta Department of Education, Fifty-Eighth Annual Report: 1963 (Edmonton: Queen's Printer, 1964), p. 196.

¹¹Alberta Department of Education, Fifty-Ninth Annual Report: 1964 (Edmonton: Queen's Printer, 1965), p. 186.

129 schools offered Shorthand 10. In the one-year period, the number of schools offering shorthand increased 63.3 per cent. An event that might have been a contributing factor to this large increase was the opening in 1963 of the vocational schools which had been built and equipped under the provisions of the Technical and Vocational Assistance Act.

In Alberta, no follow-up study of high school shorthand students has been conducted. Research that would provide answers to the following questions would be useful to those engaged in curriculum planning:

Is shorthand being used vocationally by students who received instruction in shorthand in high school?

Is there a spread between the salaries of those office workers who use shorthand and those who do not use shorthand?

Do the present high school shorthand programs provide students with vocational competence?

What types of firms will employ shorthand students directly from high school?

In the business education program, shorthand students usually receive instruction on the use of dictation machines. Is it necessary for shorthand students to receive high school training in the use of these machines? Cook¹² states:

Many people believe that the voice-recording machine will eventually eliminate the need for manual shorthand. At this time, there is no concrete evidence that such equipment has reduced the number of jobs available for those who know shorthand. However, as more and more mechanical devices for

¹²Fred S. Cook, "Outcomes in Developing Vocational Competence in Stenographic Occupations," New Perspectives in Education for Business, National Business Education Yearbook, (Washington: National Business Education Association, 1963), p. 70.

recording dictation are developed and as more and more companies develop training programs for effective dictation, there is bound to be an impact on the need for shorthand writers.

Gibson¹³ takes an extreme point of view concerning the future of shorthand:

Vocationally, shorthand is a dead duck. No office today can afford the cost of dictating a letter to an expensive worker, when the same or better results can be obtained by dictating to a low-cost machine. Why is this so? Because the estimated cost of producing a letter today is something like \$1.75 to \$2.00. When we multiply this by the millions of letters that are ground out everyday in the business mill, we can see that any saving is a must.

However, Tonne¹⁴ suggests limitations on the use of the dictating machine:

The dictating machine, like all mechanical devices, has its limitations. The dictator frequently does not have a chance to correct his material. The transcriber may have difficulty in following extremely technical dictation and instructions without a chance to ask questions. The dictating machine cannot take the place of a secretary or stenographer, for many stenographic duties cannot be performed by a machine.

There is a need to determine the extent of use of dictation machines by former high school shorthand students. Are shorthand writers in the office required to transcribe from a dictating device? Is the high school placing sufficient emphasis on transcription from dictating machines?

In both Alberta and the United States, high school business teachers are confronted with the sharp decrease in enrollment throughout

¹³E. Dana Gibson, "Office Automation Means Revolution in Business Education," Business Education World, XXXIX (March, 1959), p. 24.

¹⁴Herbert A. Tonne, Principles of Business Education, (New York: McGraw-Hill Book Company, Inc., 1961), p. 302.

the shorthand program. Shorthand enrollments in Alberta for the school years 1960-1961, 1961-1962, 1962-1963, 1963-1964, together with percentages of students proceeding to the next unit are shown in Table I. In any of the three years, the number of students proceeding from Shorthand 10 to Shorthand 20 did not exceed 44.6 per cent; and the number of students proceeding from Shorthand 20 to Shorthand 30 did not exceed 42.4 per cent. In the United States, a survey made by the State of Virginia¹⁵ in 137 schools where two years of shorthand were offered indicates that 8.4 per cent of the first-year shorthand students failed, 7.9 per cent passed with a low grade and were advised to discontinue, 49.7 per cent passed with a promotional grade but failed to proceed to the next unit, and 34 per cent entered the second year of shorthand. Reasons for this severe drop-out may be partially attributed to the difficulty of the subject, or to the lack of enthusiasm for the subject resulting from the choosing of shorthand for reasons other than vocational use.

Shorthand 10 in Alberta schools is not designed to provide students with job competence.¹⁶ Therefore, if students do not elect a second unit of instruction, the vocational value of shorthand may be seriously questioned. There is a need to investigate students' reasons for electing shorthand in their program of studies.

¹⁵Virginia Business Education Bulletin, "Implication of Shorthand Survey of Drop-Outs and Failures," Journal of Business Education, XXXIII (February, 1957), pp. 215-216.

¹⁶Alberta Department of Education, Alberta Senior High School Interim Curriculum Guide for Business Education (Edmonton: Queen's Printer, 1965), p. 20.

TABLE I

NUMBERS OF STUDENTS ENROLLING IN SHORTHAND 10, SHORTHAND 20, AND SHORTHAND 30
IN ALBERTA AND THE PERCENTAGE OF STUDENTS PROCEEDING TO THE NEXT UNIT
FOR THE SCHOOL YEARS 1960-1961, 1961-1962, 1962-1963, 1963-1964

Subject	Enroll- ment 1960- 1961 ¹⁷	Percentage of Students Proceeding to the Next Unit	Enroll- ment 1961- 1962 ¹⁸	Percentage of Students Proceeding to the Next Unit	Enroll- ment 1962- 1963 ¹⁹	Percentage of Students Proceeding to the Next Unit	Enroll- ment 1963- 1964 ²⁰
Shorthand 10	2107	40.5	2284	42.7	2454	44.6	3069
Shorthand 20	670	40.3	854	32.3	976	42.4	1095
Shorthand 30	227		270		276		414

¹⁷ Alberta Department of Education, Fifty-Sixth Annual Report, 1960-1961 (Edmonton: Queen's Printer, 1962), p. 209.

¹⁸ Alberta Department of Education, Fifty-Seventh Annual Report, 1961-1962 (Edmonton: Queen's Printer, 1963), p. 204.

¹⁹ Alberta Department of Education, Fifty-Eighth Annual Report, 1962-1963 (Edmonton: Queen's Printer, 1964), p. 186.

²⁰ Alberta Department of Education, Fifty-Ninth Annual Report, 1963-1964 (Edmonton: Queen's Printer, 1965), p. 196.

PURPOSE OF THE STUDY

Specifically, this study attempts to obtain answers to the following questions:

1. What proportion of students completing Shorthand 20 or Shorthand 30 at the Grade XII level obtain permanent employment in an office after leaving high school?
2. What types of firms employ beginning office workers who received their shorthand preparation exclusively in high school?
3. What salaries do firms pay to beginning office workers with only high school preparation in shorthand?
4. What are former students' reasons for electing shorthand as a subject of study in high school?
5. Is shorthand used on the job? If it is not used on the job, is it considered a factor in obtaining a job?
6. Do beginning office workers who try to get a job using shorthand achieve success?
7. What proportion of the shorthand writer's day is used in taking dictation and transcribing shorthand notes?
8. Do jobs requiring shorthand command better salaries than do jobs not requiring shorthand?
9. Do beginning office workers who use shorthand on the job have higher recorded marks in high school shorthand than those who do not use shorthand on the job?
10. How do beginning office workers who use shorthand on the job evaluate their high school shorthand preparation?

11. How do beginning office workers who use dictation machines on the job evaluate their high school preparation on dictation machines?
12. Do beginning office workers with high school shorthand use shorthand exclusively on the job, dictation machines exclusively, or a combination of both shorthand and dictation machines?

DELIMITATIONS

1. This study is limited to the responses and opinions of employees. No attempt has been made to obtain employer opinions.
2. Teachers' grades are the only measure of shorthand achievement.
3. Questions relating to the use of shorthand or dictation machines on the job apply to the present or last job of the respondents. The assumption is made that the most recent job provides the current salary figure and is the job which is most in line with the interests and abilities of the respondent.

DEFINITION OF TERMS

Dictation machine. Any machine which records the actual voice of the dictator on a record, tape, or belt which is in turn used by a typist for transcription purposes shall be called a dictation machine. This machine is sometimes referred to as a dictating-machine, voice-recording machine, or voice-writing machine. It may also be referred to by its trade name; "Dictaphone," "Stenorette," "Stenocord," "Philips" etc.

Machine transcription. The process of listening to a recorded voice and changing the message into typewritten form.

Vocational use of shorthand. The use of shorthand in the office for recording dictation when the speed of dictation is too fast for the use of longhand.

Shorthand transcription. The process of reading shorthand symbols and changing the message into typewritten form.

Stenographer. One who writes shorthand and does shorthand transcription.

Shorthand program. The usual shorthand program in Alberta consists of a sequence of three courses each of which is offered for a minimum time of 200 minutes per week or 40 minutes (one period) per day. In the United States, there appears to be sequences of two, three, or four semesters where shorthand is usually offered for one period (40 to 60 minutes approximately) per day. However, in many schools in the United States, there is a separate transcription period as well as the shorthand practice period during the final semester or year of the program.

Shorthand 30. The third unit in a sequence of three shorthand courses offered in Alberta schools is at present called "Shorthand 30" in Department of Education publications. Prior to 1964, this course was called "Secretarial Training 30" and was the name of the course which former students participating in this study would have taken. Since the course is essentially unchanged, the term "Shorthand 30" shall be used throughout this study when referring to the third unit of shorthand in Alberta schools.

Office. That part of a business firm where information is received, processed, stored, and transmitted. In this study, financial institutions and their branches are considered offices.

Graduate. This term shall be used to refer to a student who has received a high school diploma. The term also includes students who have qualified for university matriculation.

Temporary office job. This term shall refer to a non-career type of office job, usually of brief duration, which is followed by further education or other kind of career.

Permanent office job. Not temporary as described above. This term also includes jobs which were terminated because of marriage.

Urban area. For purposes of this study, the term, "urban area," shall include the two largest cities in Alberta, Calgary and Edmonton.

Non-urban area. All areas in Alberta excluding the two largest cities in Alberta, Calgary and Edmonton.

SOURCES OF DATA AND PROCEDURE

For the purpose of obtaining answers to the specific questions set forth on pages 9 and 10 of this study, data were obtained from the student record cards of the Alberta Department of Education files and from a questionnaire sent to former high school shorthand students who had worked in offices for approximately eleven months.

The population consisted of all 1962-1963 students of Alberta public and separate high schools who left school in June, 1963, after

having completed at least two years of shorthand with a passing mark²¹ in the advanced course which could be either Shorthand 20 or Shorthand 30. The population was divided into the following three groups:

I - Those students who had received a high school diploma and had obtained a passing mark in Shorthand 30.

II - Those students who had not received a high school diploma, but who had obtained a passing mark in Shorthand 30.

III - Those students who had received a high school diploma and had obtained a passing mark in Shorthand 20.

With the exception of those who may have repeated a course in shorthand, students in Groups I and II had taken three years of shorthand and had chosen a stenographic pattern in the high school business education program; whereas Group III had taken only two years of shorthand and may or may not have chosen a stenographic pattern in high school.

Because a final mark of 50 per cent is required for a pass in Shorthand 20, graduates with marks of 40 or 45 per cent in Shorthand 20 (a "C" or credit standing) were excluded from the main study. These students were included in the pilot study.

The Alberta Provincial Department of Education files were used to obtain students' names, addresses, and final marks received in

²¹The passing mark in Shorthand 20 is 50 per cent; in Shorthand 30, the passing mark is 40 per cent.

Shorthand 20 and Shorthand 30. Questionnaires were sent to the graduates included in the pilot study and responses were used in the preparation of the final questionnaire.

The questionnaire which is included in the appendix of this study was divided into five sections. Section A was designed to reveal respondents who had obtained permanent office jobs, reasons for not obtaining a permanent office job, length of time worked, and type of job sought. Section B attempted to determine the reasons for students' election of shorthand in high school. Section C required the respondents to supply employment information such as name of firm, length of time employed, and salary received. Section D was designed to determine students' assessment of the value of shorthand as a factor in getting a job, the proportion of the working day spent in using shorthand, and the adequacy of high school preparation in shorthand.

The questionnaires were mailed to 346 former shorthand students during the month of May, 1964, and a follow-up letter was sent two weeks later. A second follow-up letter and copy of the questionnaire were sent during the third week of June, and a final follow-up letter was sent during the last week of June. Delinquent respondents in the Edmonton area were interviewed by telephone. The number of questionnaires returned and the percentage of response appear in Table II.

Responses to each item of the questionnaire were summarized in terms of averages and percentages. Where applicable, separate and combined calculations were made for Groups I, II, and III. Employing firms were classified according to industry and salaries and numbers of

TABLE II

NUMBER OF QUESTIONNAIRES DISTRIBUTED AND RETURNED, AND
PERCENTAGE OF RESPONSE FROM EACH GROUP

Classification of Response	I	Groups II	III	All Groups
Questionnaires distributed	174	53	119	346
Students not located	10	2	10	22
Possible returns	164	51	109	324
Questionnaires completed and returned	131	41	98	270
Percentage response	79.9	80.4	89.9	83.3

respondents employed were reported for each classification. Similarly, salaries and numbers of respondents employed were reported for urban and non-urban firms.

CHAPTER II

REVIEW OF RELATED LITERATURE

Numerous surveys have been conducted in the United States and Canada in an attempt to determine the adequacy of high school stenographic training in meeting the demands of business. In some studies, employers only were surveyed; in others, office workers only were surveyed; and in many cases, both employers and employees were asked to participate.

The literature will be reviewed under three headings; "The Use of Shorthand and Dictation Machines by Office Workers," "Opportunities for Beginning Shorthand Writers," and "The Value of High School Training in Shorthand and Dictation Machines." Studies reviewed under the first two headings pertain to transcription workers in offices without reference to how the workers received their business training. Studies reviewed under the third heading pertain to those transcription workers in offices who have taken all their business training in high school.

The Use of Shorthand and Dictation Machines by Office Workers

Lower¹ surveyed 79 firms which employed a total of 9,514 office employees in the Columbus, Ohio, area and made a comparison with a

¹Joe R. Lower, "The Status of Shorthand and Other Dictating Devices Used in a Representative Number of Business Firms in Columbus, Ohio, in 1956" (unpublished Master's thesis, Ohio State University, Columbus, Ohio, 1957), p. 51.

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similar study, completed ten years previously by Welsh of 76 firms in the same area, 40 of which were the same firms as in Lower's study. Lower found that 64 or 81 per cent of the firms were using shorthand for part or all of their transcription work. Forty-three or 54.4 per cent of the firms used shorthand with a combination of one or more other devices for transcription work while 21 or 26.6 per cent of the firms used shorthand exclusively. Twenty of the 21 firms which used shorthand exclusively for transcription purposes were the smaller companies which employed between one and thirteen transcription workers. Welsh had found ten years earlier that 83 per cent of the firms used shorthand for some of their transcription work, and of these, 50 per cent used shorthand exclusively. Lower reported that of 1,311 employees engaged in transcription work, 911 or 69.5 per cent used shorthand exclusively or in combination with other devices.

Kopitzke² received replies to questionnaires from 162 firms in the Madison and Milwaukee, Wisconsin areas and reported that 85.8 per cent of the firms used shorthand to some extent while 22.8 per cent reported the use of shorthand exclusively. Conversely, 77.2 per cent of the firms used dictation machines, 14.2 per cent exclusive of shorthand.

²Irma Jean Kopitzke, "A Survey to Determine the Extent Transcribing Machines are Used in Business Communications in the Madison and Milwaukee Areas." (unpublished Master's thesis, University of Wisconsin, Madison, 1953), p. 12.

MacDonald³ surveyed 76 offices in the Edmonton, Alberta, area. For the purposes of transcription, 29 per cent of the offices used shorthand exclusively, 15.7 per cent used dictation machines exclusively, and 55.3 per cent used a combination of shorthand and dictation machines. MacDonald noted that in the government and public service establishments, 53.8 per cent of the offices used shorthand writers exclusively. MacDonald reported that almost one-third of the offices with fewer than twenty office employees used machine dictation exclusively, but that no office with over 100 office employees used machine dictation exclusively.

A survey of employed office workers in the New Castle, Indiana area was made by Hall⁴ in 1953. Of the 96 employees surveyed, 53.1 per cent had used their shorthand on the job. Those who had received their training in high school only reported their training as adequate. Hall reported that 23 out of 24 employers preferred to dictate to stenographers rather than to machines. However, in the offices of all the principal industries included in the study with one exception, and in the offices of lawyers and doctors, the trend indicates a greater

³Malcolm E. MacDonald, "A Survey of the Types of Office Machines in Edmonton, Alberta Community for the Purpose of Designing Appropriate Office Machines Instructions." (unpublished Master's thesis, University of North Dakota, Grand Forks, North Dakota, 1959), p. 138.

⁴Sarah Hall, "An Evaluation of Shorthand as a Vocational Skill by Office Workers and Employer" (unpublished Master's thesis, Ball State Teachers' College, Muncie, Indiana, 1953), p. 17.

use of recorders. When considering this data, it must be recognized that Hall's sample is small and the study is now more than ten years old.

Gilroy⁵ obtained information from 46 employers representing 14 fields of employment. Of 622 workers who did transcription work in this survey, 77 per cent used shorthand exclusively and 23 per cent used dictation machines exclusively or in combination with shorthand.

Opportunities for Beginning Shorthand Writers

Many advertisements for stenographers indicate that experience is a necessary requirement for a job. However, a survey of the following studies reveals that there is a place for the beginning stenographer. In Lower's⁶ survey of 79 firms, the question of whether or not experience was necessary for beginning employment was asked. Thirty-eight (48.1 per cent) indicated that experience was not necessary; 26 (32.9 per cent) indicated that experience was necessary; and 15 (19 per cent) did not reply to the question. In Gilroy's⁷ survey of 46 offices, a similar question of whether or not experience was necessary for beginning employment was asked. Twenty-nine (63 per cent) indicated that experience was not necessary; 12 (26 per cent)

⁵Mary Alice Gilroy, "A Study of the Stenographic Field in Hamilton, Ohio, for Vocational Guidance Information" (unpublished Master's thesis, Ohio State University, Columbus, 1956), p. 29.

⁶Lower, op. cit., p. 43.

⁷Gilroy, op. cit., p. 48.

indicated that experience was necessary; and 5 (11 per cent) did not reply to the question. It must be noted that in Gilroy's study, the word "stenographer" is defined as anyone who did transcription work. In the remaining studies reviewed in this chapter, the word "stenographer" is limited to those office workers who use shorthand in their transcription work.

A survey of the literature appears to indicate that businesses are willing to pay for the extra effort involved in acquiring shorthand skill. Lower⁸ found that the secretarial group usually received the highest salaries while the majority of the stenographic workers were among the second-highest paid workers. Gilroy⁹ reported that in 78 per cent of the organizations, "stenographic activities" (includes machine transcription) commanded higher salaries than general clerical duties. Lawrence¹⁰ found that employees using shorthand with up to four years of office experience received higher salaries than employees not using shorthand. However, beyond four years of experience, the office employees not using shorthand earned salaries equal to, and in some cases, greater than office employees using shorthand.

Shorthand writers are often said to have more opportunities for advancement than non-shorthand writers. Lower¹¹ reported that 43 per

⁸Lower, op. cit., p. 55

⁹Gilroy, op. cit., p. 33.

¹⁰Richard E. Lawrence, "The Use of Shorthand by Office Workers in Certain Minnesota Businesses with Implications for the High School Teacher" (unpublished Master's thesis, Mankato State College, Minnesota, 1962), p. 89.

¹¹Lower, op. cit., p. 46.

cent of the 79 firms surveyed said that the female employees with shorthand would have a better opportunity for promotion than those without shorthand; 27.9 per cent said they would not; and 29.1 per cent did not respond.

The Value of High School Training in Shorthand and Dictation Machines

A follow-up study of the business graduates of five small high schools and five metropolitan high schools in Michigan for a three-year period was conducted by Chamberlain.¹² On the basis of type of job, the respondents were divided into ten different categories. Chamberlain found that 45 per cent of all positions held by the subjects included in his study were included in the secretary-stenographer classification which required the actual vocational use of shorthand. However, 58 per cent reported that shorthand was a prerequisite to obtaining a job. Of those employees who had held jobs of a general office nature, eight per cent indicated that lack of proficiency held them back from advancement. Chamberlain's study was extensive but the findings are now more than ten years old.

A follow-up study by Weingarten¹³ in nine Los Angeles high schools revealed that 50 per cent of the stenographic majors (shorthand students) reported that they had found jobs in the fields for which they

¹²National Business Education Quarterly, XXIII (October, 1954) p. 15, citing Robert J. Chamberlain, "Vocational Usage of Shorthand by High School Graduates," (unpublished Master's thesis, Ball State Teachers' College, Muncie, Indiana, 1953).

¹³Kurt P. Weingarten, "Some Implications for Business Education from Follow-up Graduates of Nine Los Angeles High Schools" (unpublished Master's thesis, University of California, Los Angeles, 1950), p. 45.

were prepared. Weingarten reported that almost 75 per cent of the respondents indicated that they would have chosen shorthand again were they to replan their high school work. Weingarten's study, completed in 1950, was limited to a follow-up of students in one large city.

Lawrence¹⁴ surveyed women office workers in ten representative businesses in four different classes of cities based on population size. There were 952 respondents. Of the 276 respondents who had received shorthand training, 199 had received their training in high school only. Of the 199 respondents who had received all their shorthand training in high school, 49.8 per cent were using their shorthand. Approximately 56 (55.7 per cent) of the respondents desired a position where they might use their shorthand; 44.3 per cent showed no interest in this type of employment. Lawrence found that 60 per cent of those respondents who had received their instruction in a small high school believed that shorthand was a useful subject to take while in high school. The corresponding figures for a medium size and a large high school are 75.9 per cent and 71.6 per cent respectively.

Dublanko¹⁵ conducted a three-year follow-up study of the business education graduates of an Edmonton, Alberta, high school. Secretarial work on initial jobs after graduation was listed by 68.2

¹⁴Lawrence, op. cit., pp. 85-88.

¹⁵Tofen Dublanko, "A Follow-up Study of the Victoria Composite High School, Edmonton, Alberta, Business Education Graduates for the Years 1956, 1957 and 1958" (unpublished Master's thesis, University of North Dakota, Grand Forks, 1960), p. 45.

per cent of the respondents. Of the 115 graduates who had studied shorthand in high school, 84 (73 per cent) were using shorthand on their first jobs. The extent to which shorthand was used as indicated by the 84 respondents is as follows: full time, 29 (34.5 per cent); half days, 15 (17.9 per cent); quarter days, 20 (23.8 per cent); and occasionally, 20 (23.8 per cent). Seventy-four business graduates stated that shorthand was a key factor in obtaining jobs. Seventy-one of these graduates were using shorthand on the job and three were not.

Office workers are often asked to indicate which business subjects included in their high school training were of most use on the job. Lawrence¹⁶ reported that the specific office skills used more than shorthand by over half the respondents were typewriting, filing, and the ability to operate calculating machines. The specific office skills used less than shorthand by over half the respondents were bookkeeping and the ability to operate transcription machines. Dublanko's¹⁷ subjects reported that typewriting was the first and shorthand the second most helpful course on the job. Similarly, Weingarten's¹⁸ subjects reported that typewriting was the first and shorthand the second most useful course on the job.

The findings of two studies indicate that a student's shorthand ability is a factor in determining the extent to which shorthand will

¹⁶Lawrence, op. cit., p. 89.

¹⁷Dublanko, op. cit., p. 48.

¹⁸Weingarten, op. cit., p. 50.

be used on the job. Lawrence¹⁹ concluded from his study that there was a positive relationship between the extent of use of shorthand on the job and each of the following factors: the amount of shorthand training in terms of years of training, the shorthand grade received, the speed achievement in shorthand, and the English grade received. Dublanko²⁰ reported that the majority of graduates who were writing shorthand at eighty words per minute or better when they left high school were using shorthand on the job. He concluded that the extent to which shorthand was used on the job varied directly with the shorthand writing speed. Hall's²¹ study showed that office employees with two years of shorthand training had made the most vocational use of their training and employees with above average marks were the ones who had used shorthand on the job.

The amount of training on transcribing machines necessary for work in offices has been investigated. Kopitzke²² reported that 126 firms out of 162 stated that training in the use of transcribing machines was vital. MacDonald²³ reported that a majority of businessmen preferred to have transcribing machine operators trained on the skill level rather than on the acquaintanceship level. Dublanko²⁴ reported that opinions of the respondents indicated that the transcribing machine should be taught on the skill level. Hall²⁵ reported

¹⁹Lawrence, op. cit., p. 85.

²⁰Dublanko, op. cit., p. 77.

²¹Hall, op. cit., p. 21.

²²Kopitzke, op. cit., p. 8.

²³MacDonald, op. cit., p. 69.

²⁴Dublanko, op. cit., p. 69

²⁵Hall, op. cit., p. 21.

that of 25 persons who had received training on transcribing machines, only five had used this training on the job.

The studies reviewed in this chapter would appear to indicate the following:

1. Fifty to seventy per cent of shorthand-trained workers use shorthand vocationally.
2. Graduates of high schools who have been trained in stenography but without previous office experience can, and do, find jobs as stenographers and secretaries.
3. Beginning employees with stenographic skills receive better salaries and have more opportunities for promotion than other clerical workers.
4. Not all stenography graduates desire employment in the area for which they have been trained.
5. The extent of use of shorthand on the job varies directly with the degree of skill attained.
6. Office workers list typewriting as the most useful business subject taken in high school. Shorthand is listed as the second most useful.
7. A majority of office workers would take shorthand again were they to repeat high school.
8. Two years of high school shorthand in the United States or three years of shorthand in Alberta are adequate for use on the job. Less than this is inadequate in most cases.

CHAPTER III

SUMMARY OF DATA AND FINDINGS

Data received from the questionnaires and from the files of the Department of Education were summarized to provide answers to the following questions grouped according to five major divisions of the study.

I. Employment of Respondents According to Classifications of Industry

1. What percentage of students completing Shorthand 20 or 30 at the Grade XII level obtain permanent employment in an office after leaving high school?
2. What types of firms employ beginning office workers who received their shorthand preparation exclusively in high school?
3. What salaries do firms pay to beginning office workers with only high school preparation in shorthand?

II. Respondents' Reasons for Electing Shorthand in High School

4. What are former students' reasons for electing shorthand as a subject of study in high school?

III. Respondents' Use and Evaluation of High School Preparation in Shorthand

5. Is shorthand used on the job? If it is not used on the job, is it considered a factor in obtaining a job?
6. Do beginning office workers who try to get a job using shorthand achieve success?
7. What proportion of the shorthand writer's day is used in taking dictation and transcribing shorthand notes?

8. Do jobs requiring shorthand command better salaries than do jobs not requiring shorthand?
9. Do beginning office workers who use shorthand on the job have higher recorded marks in high school shorthand than those who do not use shorthand on the job?
10. How do beginning office workers who use shorthand on the job evaluate their high school shorthand preparation?

IV. Respondents' Use and Evaluation of High School Preparation on Dictation Machines

11. How do beginning office workers who use dictation machines on the job evaluate their high school preparation on dictation machines?

V. Use of Shorthand Compared with Use of Dictation Machines

12. Do beginning office workers with high school shorthand use shorthand exclusively on the job, dictation machines exclusively, or a combination of both shorthand and dictation machines?

EMPLOYMENT OF RESPONDENTS ACCORDING TO CLASSIFICATION OF INDUSTRY

Approximately eleven months had elapsed between the date when the respondents left high school and the date on which the questionnaire was completed. The total number of respondents who were working in offices at the time the questionnaire was completed was 218 or 80.7 per cent. Of the 218 respondents who were working, 110 or 50.5 per cent were included in Group I, 31 or 14.2 per cent were included in Group II, and 77 or 35.3 per cent were included in Group III.

Two hundred and forty or 88.9 per cent of the total respondents had worked at a permanent office job with no further training after leaving high school and 30 or 11.1 per cent had either worked at temporary office jobs or had not obtained office work after leaving high school. The stated reasons for not obtaining permanent office jobs are summarized in Table III. Nineteen or 63.3 per cent of the respondents reported that the most common reason for not obtaining permanent office work was the pursuit of further education. Approximately one-half of the nineteen respondents were included in Group III, the graduates with only two years of high school shorthand.

In order to answer questions concerning salaries and types of firms employing beginning office workers, it was necessary to summarize and group the data from Section C of the questionnaire according to a modification of the classifications of industry described in the Standard Industrial Classification Manual.¹ The fifteen classifications used were as follows:

Oil and Oil Service

Manufacturing

Construction

Transportation, Communication, and Other Utilities

Wholesale Trade

Retail Trade

¹Dominion Bureau of Statistics, Standard Industrial Classification Manual (Ottawa: Queen's Printer, 1960).

TABLE III

RESPONDENTS' REASONS FOR NOT OBTAINING PERMANENT WORK IN AN OFFICE
UPON LEAVING HIGH SCHOOL

Reasons	GROUP			TOTAL AND PERCENTAGE	
	I	II	III	Totals	Percentage
Married immediately after leaving high school	0	0	2	2	6.7
Decided to continue education	5	5	9	19	63.3
Unable to get a job	1*	1	1	3	10.0
Changed to another occupation	1	0	3	4	13.3
Unspecified	2	0	0	2	6.7
Totals	9	6	15	30	

*Male respondent

Banks and Treasury Branches

Insurance and Real Estate

Trust and Finance

Education and Related Services

Health and Welfare

Services to Business Management

Classifications of industry ranked according to number of beginning office workers appears in Table IV. The four classifications employing 50.4 per cent of the respondents on their first jobs were Transportation, Communication, and Other Utilities; Insurance and Real Estate; Provincial Government; and Banks and Treasury Branches. Construction ranked lowest and employed only two respondents on their beginning jobs.

In this study, the two largest cities in Alberta, Calgary and Edmonton, were defined as urban; whereas the smaller cities, towns, and villages in Alberta were defined as non-urban. This procedure was used to approximate that used in the Canada Yearbook² where average weekly wages and salaries are given by province and urban area. Calgary and Edmonton are the only areas in Alberta identified as urban.

Classifications of industry ranked according to the highest average beginning salary in the two largest cities of Alberta (urban areas) appear in Table V. Federal Government, Local Government, and Transportation, Communication, and Other Utilities ranked highest; Banks and Treasury Branches ranked lowest. Classifications of industry

²Dominion Bureau of Statistics, Government of Canada, Canada Yearbook (Ottawa: Queen's Printer, 1965), pp. 730-731.

TABLE IV

CLASSIFICATIONS OF INDUSTRY RANKED ACCORDING TO NUMBER
OF BEGINNING OFFICE WORKERS

Classifications of Industry	Number (N = 224)
Transportation, Communication, and Other Utilities	32
Insurance and Real Estate	29
Provincial Government	28
Banks and Treasury Branches	24
Wholesale Trade	18
Retail Trade	18
Services to Business Management	15
Manufacturing	11
Oil and Oil Service	10
Federal Government	10
Trust and Finance	8
Health and Welfare	7
Education and Related Services	7
Local Government	5
Construction	2

TABLE V

CLASSIFICATIONS OF INDUSTRY IN URBAN AREAS RANKED ACCORDING
TO AVERAGE BEGINNING SALARIES

Classifications of Industry	Average Salary	Number of Persons
Federal Government	\$204.29	7
Local Government	202.50	4
Transportation, Communication, and Other Utilities	201.45	29
Oil and Oil Service	200.50	10
Provincial Government	188.89	27
Education and Related Services	186.36	7
Insurance and Real Estate	183.41	27
Services to Business Management	182.69	13
Manufacturing	181.89	9
Trust and Finance	181.43	7
Retail Trade	177.56	14
Construction	175.00	2
Health and Welfare	174.67	6
Wholesale Trade	173.13	16
Banks and Treasury Branches	170.95	19
All Classifications	185.94	197

ranked according to the highest average salary after six months' employment are given in Table VI. Local Government, Oil and Oil Service, and Federal Government ranked highest in average salary after six months' employment; Banks and Treasury Branches and Construction ranked lowest. However, there were only two respondents in the latter classification.

Classifications of industry in the non-urban areas of Alberta³ ranked according to the highest average beginning salary and salary after six months' employment are shown in Tables VII and VIII. Because in both tables, the numbers of respondents per classification of industry are small, the rank order of average salaries is questionable. However, it would appear that the Provincial and Federal Governments ranked highest. The average beginning salary in the non-urban areas of Alberta was \$25.98 less than that of the urban areas; the average salary after six months' employment was \$33.40 less.

In Tables IX, X, XI and XII, beginning salaries and salaries after six months' employment for respondents in urban areas are shown for Groups I, II, and III separately, then combined for all groups. In each table, salaries are reported in categories of high, low, and average for each classification of industry. Salaries after six months' employment are reported only for respondents who had worked at least six months on their initial job.

An examination of Table IX shows that the highest average beginning salaries for respondents of Group I in urban areas of Alberta

³Excluding Calgary and Edmonton

TABLE VI

CLASSIFICATIONS OF INDUSTRY IN URBAN AREAS RANKED ACCORDING
TO AVERAGE SALARIES AFTER SIX MONTHS' EMPLOYMENT

Classifications of Industry	Average Salary	Number of Persons
Local Government	\$229.50	4
Oil and Oil Service	225.00	9
Federal Government	223.21	7
Transportation, Communication, and Other Utilities	221.48	22
Education and Related Services	207.29	7
Provincial Government	206.80	25
Health and Welfare	204.33	3
Insurance and Real Estate	202.25	22
Manufacturing	201.90	7
Services to Business Management	201.54	13
Retail Trade	197.77	13
Wholesale Trade	196.23	13
Trust and Finance	196.23	5
Banks and Treasury Branches	193.50	17
Construction	175.00	2
All Classifications	206.17	169

TABLE VII

CLASSIFICATIONS OF INDUSTRY RANKED ACCORDING TO AVERAGE
MONTHLY BEGINNING SALARIES FOR RESPONDENTS
IN NON-URBAN AREAS OF ALBERTA

Classifications of Industry	Average Salary	Number of Persons
Provincial Government	\$183.00	1
Federal Government	180.83	3
Transportation, Communication, and Other Utilities	176.00	3
Manufacturing	162.50	2
Retail Trade	160.75	4
Banks and Treasury Branches	157.50	5
Insurance and Real Estate	155.00	2
Trust and Finance	150.00	1
Health and Welfare	150.00	1
Services to Business to Business Management	150.00	2
Local Government	150.00	1
Wholesale Trade	125.00	2
All Classifications	159.96	27

TABLE VIII

CLASSIFICATIONS OF INDUSTRY RANKED ACCORDING TO AVERAGE MONTHLY
SALARIES AFTER SIX MONTHS' EMPLOYMENT FOR RESPONDENTS
IN NON-URBAN AREAS OF ALBERTA

Classifications of Industry	Average Salary	Number of Persons
Provincial Government	\$190.60	1
Manufacturing	190.00	2
Federal Government	184.17	3
Retail Trade	176.67	3
Insurance and Real Estate	172.50	2
Trust and Finance	170.00	1
Banks and Treasury Branches	167.80	6
Local Government	166.66	1
Services to Business Management	162.50	2
Wholesale Trade	157.50	2
Health and Welfare	150.00	1
All Classifications	172.77	24

TABLE IX

HIGH, LOW, AND AVERAGE BEGINNING SALARIES AND SALARIES AFTER SIX MONTHS'
EMPLOYMENT BY CLASSIFICATION OF INDUSTRY FOR GROUP I
RESPONDENTS IN URBAN AREAS OF ALBERTA

Classifications of Industry	Number (N=107)	Beginning			Number (N=93)	After Six Months' Employment		
		Salary				Salary		
		High	Low	Average		High	Low	Average
Oil and Oil Service	6	\$225.00	\$180.00	\$205.00	6	\$250.00	\$200.00	\$231.67
Manufacturing	4	200.00	152.00	176.75	4	210.00	173.33	195.83
Construction	1	-	-	200.00	1	-	-	200.00
Transportation, Commu- nication, and Other Utilities	18	280.00	173.50	206.19	13	280.00	180.00	226.92
Wholesale Trade	9	200.00	160.00	179.44	7	215.00	190.00	202.29
Retail Trade	8	200.00	150.00	173.48	7	221.00	150.00	191.00
Banks and Treasury Branches	6	200.00	167.00	182.33	4	225.00	185.00	207.50
Insurance and Real Estate	11	215.00	168.00	186.91	11	230.00	175.00	203.82

Table IX (Continued)

Classifications of Industry	Beginning			After Six Months' Employment				
	Number (N=107)	Salary		Number (N=93)	Salary			
		High	Low		High	Low	Average	
Trust and Finance	6	\$200.00	\$160.00	\$181.67	4	\$200.00	\$185.00	\$193.75
Education and Related Services	5	200.00	180.00	186.90	5	244.50	169.50	208.20
Health and Welfare	3	180.00	170.00	175.00	2	210.00	190.00	200.00
Services to Business Management	9	220.00	160.00	180.00	9	225.00	160.00	198.33
Local Government	3	215.00	200.00	210.00	3	255.00	233.00	242.67
Provincial Government	13	215.00	170.00	193.08	12	270.00	190.00	211.67
Federal Government	5	230.00	170.00	203.00	5	260.00	170.00	226.00
All Classifica- tions	107	280.00	150.00	189.96	93	280.00	150.00	210.19

TABLE X

HIGH, LOW AND AVERAGE BEGINNING SALARIES AND SALARIES AFTER SIX MONTHS'
EMPLOYMENT BY CLASSIFICATION OF INDUSTRY FOR GROUP II
RESPONDENTS IN URBAN AREAS OF ALBERTA

Classifications of Industry	Beginning			After Six Months' Employment				
	Number (N=29)	Salary		Number (N=22)	Salary			
		High	Low Average		High	Low Average		
Oil and Oil Service	3	\$210.00	\$165.00	\$191.67	3	\$225.00	\$185.00	\$211.67
Transportation, Commu- nication, and Other Utilities	4	198.00	175.00	190.75	3	208.00	175.00	197.00
Wholesale Trade	2	165.00	150.00	157.50	1	-	-	190.00
Retail Trade	4	201.00	192.00	193.25	3	220.00	204.00	208.00
Banks and Treasury Branches	2	160.00	160.00	160.00	2	185.00	180.00	182.50
Insurance and Real Estate	6	205.00	170.00	184.17	3	215.00	200.00	206.83
Health and Welfare	2	178.00	165.00	171.50	1	-	-	243.00

TABLE X (Continued)

Classifications of Industry	Beginning			After Six Months' Employment		
	Number (N=29)	Salary		Number (N=22)	Salary	
		High	Low Average		High	Low Average
Services to Business Management	2	\$185.00	\$170.00	\$177.50	2	\$200.00 \$180.00 \$190.00
Provincial Government	3	200.00	180.00	186.67	3	200.00 190.00 193.33
Federal Government	1	-	-	200.00	1	- - 207.50
All Classifications	29	210.00	150.00	183.07	22	243.00 175.00 201.60

TABLE XI

HIGH, LOW, AND AVERAGE BEGINNING SALARIES AND SALARIES AFTER SIX MONTHS' EMPLOYMENT BY CLASSIFICATION OF INDUSTRY FOR GROUP III RESPONDENTS IN URBAN AREAS OF ALBERTA

Classifications of Industry	Beginning			After Six Months' Employment		
	Number (N=61)	Salary		Number (N=54)	Salary	
		High	Low Average		High	Low Average
Oil and Oil Service	1	\$ -	\$ -	\$200.00	0	\$ - \$ -
Manufacturing	5	225.00	160.00	186.00	3	240.00 190.00 210.00
Construction	1	-	-	150.00	1	- 150.00
Transportation, Commu- nication, and Other Utilities	6	219.00	165.00	197.92	6	284.00 190.00 221.92
Wholesale Trade	5	185.00	145.00	168.00	5	200.00 170.00 189.00
Retail Trade	3	185.00	160.00	168.33	3	250.00 180.00 203.00
Banks and Treasury Branches	11	192.00	150.00	166.73	11	219.00 175.00 190.55
Insurance and Real Estate	10	190.00	160.00	179.10	8	215.00 173.00 198.38

TABLE XI (Continued)

Classifications of Industry	Beginning			After Six Months' Employment			
	Number (N=61)	Salary			Number (N=54)	Salary	
		High	Low	Average		High	Low
Trust and Finance	1	\$ -	\$ -	\$180.00	1	\$ -	\$180.00
Educations and Related Services	2	190.00	180.00	185.00	2	220.00	205.00
Health and Welfare	1	-	-	180.00	0	-	-
Services to Business Management	2	200.00	200.00	200.00	2	245.00	227.50
Local Government	1	-	-	180.00	1	-	190.00
Provincial Government	11	200.00	180.00	184.55	10	240.00	205.00
Federal Government	1	-	-	215.00	1	-	225.00
All Classifications	61	225.00	145.00	180.20	54	284.00	201.10

TABLE XII

HIGH, LOW, AND AVERAGE BEGINNING SALARIES AND SALARIES AFTER SIX MONTHS' EMPLOYMENT BY CLASSIFICATION OF INDUSTRY FOR ALL RESPONDENTS WORKING IN URBAN AREAS OF ALBERTA

Classifications of Industry	Beginning			After Six Months' Employment		
	Number (N=197)	Salary		Number (N=169)	Salary	
		High	Low		High	Average
Oil and Oil Service	10	\$225.00	\$165.00	\$200.50	9	\$250.00 \$185.00 \$225.00
Manufacturing	9	225.00	152.00	181.89	7	240.00 173.00 201.90
Construction	2	200.00	150.00	175.00	2	200.00 150.00 175.00
Transportation, Communi- cation, and Other Utilities	29	280.00	165.00	201.45	22	284.00 175.00 221.48
Wholesale Trade	16	200.00	150.00	173.13	13	215.00 170.00 196.23
Retail Trade	14	201.00	150.00	177.56	13	221.00 150.00 197.77
Banks and Treasury Branches	19	200.00	150.00	170.95	17	225.00 175.00 193.59
Insurance and Real Estate	27	215.00	160.00	183.41	22	230.00 173.00 202.25

TABLE XII (Continued)

Classifications of Industry	Beginning			After Six Months' Employment		
	Number (N=197)	Salary		Number (N=169)	Salary	
		High	Low		High	Average
Trust and Finance	7	\$200.00	\$160.00	\$181.43	5	\$200.00 \$180.00 \$191.00
Education and Related Services	7	200.00	180.00	186.36	7	244.50 169.50 207.29
Health and Welfare	6	180.00	165.00	174.67	3	243.00 190.00 204.33
Services to Business Management	13	220.00	160.00	182.69	13	245.00 160.00 201.54
Local Government	4	215.00	180.00	202.50	4	255.00 190.00 229.50
Provincial Government	27	215.00	170.00	188.89	25	270.00 190.00 206.80
Federal Government	7	280.00	170.00	204.29	7	260.00 170.00 223.21
All Classifications	197	280.00	150.00	185.94	169	284.00 150.00 206.17

are provided by Local Government (\$210.00); Transportation, Communication, and Other Utilities (\$206.19); and Oil and Oil Service (\$205.00). The highest average salaries after six months' employment are provided by Local Government (\$242.67); Oil and Oil Service (\$231.67); and Transportation, Communication, and Other Utilities (\$226.92). The classifications of industry which included the greatest number of beginning employees according to Group I respondents were Transportation, Communication, and Other Utilities (18); Provincial Government (13); and Insurance and Real Estate (11). The average difference in salary over all classifications of industry between beginning salary and salary after six months' employment was \$20.23.

An examination of Table X shows that the highest average beginning salaries for respondents of Group II in the urban areas of Alberta are provided by Federal Government (\$200.00); Retail Trade (\$193.25); and Oil and Oil Service (\$191.67). The highest average salaries after six months' employment are provided by Oil and Oil Service (\$211.67); Retail Trade (\$208.00); and Federal Government (\$207.50). The classifications which included the greatest number of beginning employees according to respondents of Group II were Insurance and Real Estate (6); Transportation, Communication, and Other Utilities (4); and Retail Trade (4). The average difference in salary over all classifications of industry between starting salaries and salaries after six months' employment was \$18.53.

An examination of Table XI shows that the highest average beginning salaries for respondents of Group III in the urban areas of

Alberta are provided by Federal Government (\$215.00); Oil and Oil Service (\$200.00); and Services to Business Management (\$200.00). The highest average salaries after six months' employment are provided by Services to Business Management (\$227.50); Federal Government (\$225.00); and Transportation, Communication, and Other Utilities (\$221.92). The average difference in salary over all classifications of industry between beginning salaries and salaries after six months' employment was \$20.90. The classifications of industry which included the greatest number of beginning employees according to respondents of Group III were Provincial Government (11); Banks and Treasury Branches (11); and Insurance and Real Estate (10).

An examination of Tables IX, X, and XI reveals that the average salaries are highest for respondents of Group I and progressively lower for respondents of Groups II and III. The difference in average salaries between Group I and Group II was \$6.89 for beginning salaries and \$8.50 for salaries after six months' employment. The difference in average salaries between Group II and Group III was \$2.87 for beginning salaries and \$.50 for salaries after six months' employment. The average increment after six months' employment for respondents of Groups I, II, and III was \$20.23, \$18.53, and \$20.90 respectively. An examination of Tables IX, X, and XI also reveals that a larger proportion of Group III respondents worked in banks and Treasury Branches than did Group I or Group II respondents.

An examination of Table XII shows that the highest average beginning salaries of all respondents working in urban areas of Alberta

were provided by Federal Government (\$204.29); Local Government (\$202.50); and Transportation, Communication, and Other Utilities, (\$201.45). The highest average salaries after six months' employment were provided by Local Government (\$229.50); Oil and Oil Service (\$225.00); and Federal Government (\$223.21). The average difference in salaries over all classifications of industry between beginning salaries and salaries after six months' employment was \$20.23. The classifications of industry which included the greatest number of beginning employees according to all respondents in urban areas were Transportation, Communication, and Other Utilities (29); Insurance and Real Estate (27); and Provincial Government (27).

Beginning salaries and salaries after six months' employment for all non-urban respondents are presented in Table XIII. The numbers of respondents in each classification were too small to make reasonable comparisons among classifications of industry.

An examination of Tables XII and XIII reveals that average salaries for urban respondents were higher than average salaries for non-urban respondents. For all respondents, the average beginning salary for urban areas was higher than beginning salaries for non-urban areas by \$25.98; whereas the average salary after six months' employment was higher by \$33.40. For urban respondents, the average difference in salary over all classifications of industry between beginning salary and salary after six months' employment was \$20.23. The average difference for non-urban respondents was \$12.81.

TABLE XIII

HIGH, LOW, AND AVERAGE BEGINNING SALARIES AND SALARIES AFTER SIX MONTHS'
EMPLOYMENT BY CLASSIFICATION OF INDUSTRY FOR ALL RESPONDENTS
IN NON-URBAN AREAS OF ALBERTA

Classifications of Industry	Beginning			After Six Months' Employment				
	Number N=27)	Salary		Number (N=24)	Salary			
		High	Low		High	Low	Average	
Manufacturing	2	\$165.00	\$160.00	162.50	2	\$200.00	\$180.00	\$190.00
Transportation, Commu- nication, and Other Utilities	3	198.00	150.00	176.00	0	-	-	-
Wholesale Trade	2	150.00	100.00	125.00	2	165.00	150.00	157.50
Retail Trade	4	180.00	145.00	160.75	3	200.00	150.00	176.67
Banks and Treasury Branches	5	170.00	144.50	157.50	6	185.00	144.50	167.80
Insurance and Real Estate	2	170.00	140.00	155.00	2	185.00	160.00	172.50

TABLE XIII (Continued)

Classifications of Industry	Beginning			After Six Months' Employment			
	Number (N=27)	Salary		Number (N=24)	Salary		
		High	Low Average		High	Low Average	
Trust and Finance	1	\$ -	\$ -	\$150.00	1	\$ -	\$170.00
Health and Welfare	1	-	-	150.00	1	-	165.00
Services to Business Management	2	150.00	150.00	150.00	2	170.00	162.50
Local Government	1	-	-	150.00	1	-	166.67
Provincial Government	1	-	-	183.00	1	-	190.60
Federal Government	3	182.50	180.00	180.83	3	190.00	184.17
All Classifications	27	198.00	140.00	159.96	24	200.00	172.77

RESPONDENTS' REASONS FOR ELECTING SHORTHAND IN HIGH SCHOOL

The order and frequency of respondents' reasons for electing shorthand in high school are given in Table XIV. The most important reason, the desire to get a better and more interesting job, was reported as a first choice by 74.6 per cent of the respondents and as a second choice by 8.1 per cent of the respondents. The second most important reason, the guidance of a teacher or counsellor, was reported as a first choice by 9.2 per cent of the respondents and as a second choice by 7.0 per cent of the respondents. The third most important reason, the requirement of shorthand in the program selected, was reported as a first choice by 6.2 per cent of the respondents and as a second choice by 3.1 per cent of the respondents.

RESPONDENTS' USE AND EVALUATION OF HIGH SCHOOL

TRAINING IN SHORTHAND

Extent of use of shorthand on the job, average salaries and final marks of users and non-users of shorthand on the job are reported under the first heading of the findings. A summary of respondents' ratings of high school preparation in shorthand are reported under the second heading of the findings.

Use of Shorthand on the Job

Respondents were asked in the questionnaire to indicate the use or non-use of shorthand on the last job held. A summary of the replies is given in Table XV. If respondents did not use shorthand on the job,

TABLE XIV

ORDER OF IMPORTANCE AND FREQUENCY OF RESPONDENTS' REASONS FOR
ELECTING SHORTHAND IN HIGH SCHOOL

Reasons	Order of Importance					
	First Choice		Second Choice		Third Choice	
	Number (N=260)	Per Cent	Number (N=260)	Per Cent	Number (N=260)	Per Cent
I hoped to obtain a better and more interesting job . . . as the result of my shorthand education	194	74.6	21	8.1	6	2.3
A teacher or guidance counsellor suggested that the . . . stenographic program would be best for me	24	9.2	18	7.0	4	1.5
I had no choice because shorthand was required in the . . program which I selected	16	6.2	8	3.1	8	3.1
I thought that shorthand was an easy subject	6	2.3	14	5.4	8	3.1
I thought that shorthand would be an interesting subject .	5	1.9	3	1.2	2	.8
I felt that shorthand would enable me to get a part-time . job while going to university or provide something to fall back on in case I did not continue on to higher education	4	1.5	0	0	2	.8
I considered shorthand essential for an office job	4	1.5	0	0	0	0
I felt that shorthand would be a challenge	3	1.2	0	0	0	0
My parents wanted me to take shorthand	2	.8	7	2.7	0	0
I took shorthand out of curiosity	1	.4	0	0	0	0
I wanted shorthand for personal use	1	.4	0	0	0	0

TABLE XV

REPORTED USE OF SHORTHAND ON THE JOB OR AS AN AID IN OBTAINING A JOB
BY RESPONDENTS IN GROUPS I, II, AND III

	Group						All Groups (N = 236)*	
	I (N = 120)		II (N = 35)		III (N = 81)			
Use of Shorthand	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
(a) Shorthand was used on the job	78	65.0	15	42.9	32	39.5	125	53.0
(b) Shorthand was not used on the job	42	35.0	20	57.1	49	60.5	111	47.0
(1) Shorthand was a stated requirement for employment	7	5.8	2	5.7	2	2.5	11	4.7
(2) Shorthand helped in obtaining the job	19	15.8	6	17.1	14	17.3	39	16.5
(3) Shorthand was not used and did not help in obtaining the job	16	13.3	12	34.3	33	40.7	61	25.8

* Four respondents reported information that could not be used.

they were asked to indicate whether shorthand was a stated job requirement or whether they felt that it helped them in obtaining the job.

An examination of Table XV reveals that 53 per cent of the respondents used shorthand on the job. Sixty-five per cent of the respondents of Group I, 42.9 per cent of the respondents of Group II, and 39.5 per cent of the respondents of Group III used shorthand on the job. Approximately 21 per cent (21.2) of the respondents were not using shorthand on the job, but indicated that shorthand was a stated requirement for employment or that they felt shorthand ability was a factor in obtaining their jobs.

The use or non-use of shorthand on the job by respondents who tried and respondents who did not try to obtain a job using shorthand is given in Table XVI. Approximately 67 per cent (66.8) of the respondents who tried to obtain a job using shorthand were using shorthand on the job and approximately 33 per cent (33.2) were not. Approximately 14 per cent (14.3) of the respondents who did not try to obtain a job using shorthand were using shorthand on the job and approximately 86 per cent (85.7) were not. Approximately 76 per cent (76.3) of the Group I respondents who tried to get a job where shorthand would be used were successful.

The reported use of shorthand on the job in terms of fractions of the working day is given in Table XVII. Thirty-seven or 29.6 per cent of the respondents reported use of shorthand for one-half or less of the working day; 88 or 70.4 per cent reported use of shorthand for one-quarter or less of the working day; and only three respondents

TABLE XVI

USE OR NON-USE OF SHORTHAND FOR RESPONDENTS
WHO TRIED AND RESPONDENTS WHO DID NOT TRY
TO OBTAIN A JOB USING SHORTHAND

Group	Use or Non-Use of Shorthand on the Job	Tried to Obtain a Job Using Shorthand		Did not Try to Obtain a Job Using Shorthand	
		Number	Per Cent	Number	Per Cent
I	Shorthand used	74	76.3	4	18.2
	Shorthand not used	23	23.7	18	81.8
II	Shorthand used	13	46.4	1	14.3
	Shorthand not used	15	53.6	6	85.7
III	Shorthand used	28	53.9	3	11.1
	Shorthand not used	24	46.1	24	88.9
All Groups	Shorthand used	125	66.8	8	14.3
	Shorthand not used	62	33.2	48	85.7

TABLE XVII
THE REPORTED USE OF SHORTHAND ON THE JOB IN TERMS OF
FRACTIONS OF THE WORKING DAY

Fractions of the Working Day	Group I (N = 78) Number Per Cent	Group II (N = 15) Number Per Cent	Group III (N = 32) Number Per Cent	All Groups (N = 125) Number Per Cent
All the day	2 2.6	0 0	1 3.1	3 2.4
Three-quarters of the day	10 12.8	1 6.7	2 6.3	13 10.4
One-half of the day	7 9.0	2 13.3	12 37.5	21 16.8
One-quarter of the day	22 28.2	7 46.7	6 18.8	35 28.0
Less than one-quarter of the day	37 47.4	5 33.3	11 34.4	53 42.4
One-half or more of the day	19 24.4	3 20.0	15 46.9	37 29.6
One-quarter or less of the day	59 75.6	12 80.0	17 53.2	88 70.4

reported use of shorthand for all the working day. It is noteworthy that Group III included the highest percentage of persons using shorthand one-half or more of the working day.

Average beginning salaries according to respondents' use or non-use of shorthand on the job in the urban areas of Alberta is given in Table XVIII. For determining average beginning salaries, respondents who were on their second or third jobs were excluded because the factor of experience would influence beginning salaries in these cases. An examination of Table XVIII reveals that respondents who used shorthand on the job reported average beginning salaries which were \$14.35 higher than average beginning salaries of respondents who reported no use of shorthand. Average beginning salaries for respondents of Groups I, II, and III who used shorthand on the job were higher than average beginning salaries for respondents of Groups I, II, and III who did not use shorthand on the job. The differences in average beginning salary were \$10.14, \$20.80, and \$11.21 respectively.

Average last salaries according to respondents' use or non-use of shorthand on the job in the urban areas of Alberta are given in Table XIX. For determining the average last salaries, only those respondents were included who had worked a total of six months or more in an office. An examination of Table XIX reveals that respondents who used shorthand on the job reported average last salaries which were \$17.22 higher than average last salaries of respondents who reported no use of shorthand on the job. Average last salaries for respondents of Groups I, II, and III who used shorthand on the job

TABLE XVIII

AVERAGE BEGINNING SALARIES ACCORDING TO THE USE OR NON-USE
OF SHORTHAND ON THE JOB FOR RESPONDENTS IN THE
URBAN AREAS OF ALBERTA

Use or Non-Use of Shorthand	Group I (N = 84) Number Average Salary	Group II (N = 25) Number Average Salary	Group III (N = 51) Number Average Salary	All Groups (N = 160) Number Average Salary
Used on the job	55 \$195.12	11 \$191.73	18 \$187.81	84 \$193.11
Not used on the job	29 184.98	14 170.93	33 176.60	76 178.76

TABLE XIX
AVERAGE LAST SALARIES ACCORDING TO THE USE OR NON-USE
OF SHORTHAND ON THE JOB FOR RESPONDENTS
IN THE URBAN AREAS OF ALBERTA

Use or Non-Use of Shorthand	Group I (N = 102)		Group II (N = 25)		Group III (N = 58)		All Groups (N = 185)	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Used on the job	69	\$216.88	11	\$208.64	20	\$222.58	100	\$217.11
Not used on the job	33	206.04	14	190.00	38	198.18	85	199.89

were higher than average last salaries for respondents of Groups I, II, and III who did not use shorthand on the job. The differences in average salary were \$10.84, \$18.64, and \$24.40 respectively.

Average final marks of each group as compared with the use of shorthand on the last job held is given in Table XX. Among the three groups, the final average marks for respondents who used shorthand on the job were consistently higher than marks for respondents who did not use shorthand on the job.

Evaluation of High School Shorthand Preparation

Final high school marks and ratings of high school shorthand preparation by respondents who used shorthand on the job are presented in Table XXI. Only nine (7.2 per cent) of the respondents reported their high school preparation in shorthand as "not adequate." Twenty-one (16.8 per cent) of the respondents reported their preparation as "more than adequate"; whereas 95 (76 per cent) reported their preparation as "adequate." Of Groups I and II, respondents who rated their high school shorthand preparation as "more than adequate" had average final marks of 77.8 and 77.5 per cent respectively. The average final marks of the respondents in Groups I and II who rated high school preparation as "not adequate" were 58.8 per cent and 50.0 per cent respectively. It is noteworthy that 87.5 per cent of the respondents in Group III indicated that two years of shorthand preparation was either adequate or more than adequate for their vocational use.

TABLE XX

AVERAGE FINAL MARKS OF EACH GROUP AS COMPARED WITH
THE USE OF SHORTHAND ON THE LAST JOB FOR
ALL RESPONDENTS OF ALBERTA

Group	Average Final Mark	
	Shorthand Used	Shorthand not Used
I	69.2 (N = 78)	61.7 (N = 42)
II	62.3 (N = 15)	56.0 (N = 20)
III	69.8 (N = 32)	63.9 (N = 48)

TABLE XXI

FINAL HIGH SCHOOL MARKS AND RATINGS OF HIGH SCHOOL SHORTHAND*
PREPARATION BY RESPONDENTS WHO USED
SHORTHAND ON THE JOB

Group	Rating	Number	Per Cent	Average Final Mark
I (N = 78)	More than adequate	16	20.5	77.8
	Adequate	58	74.4	68.1
	Not adequate	4	5.1	58.8
II (N = 15)	More than adequate	2	13.3	77.5
	Adequate	12	80.0	60.8
	Not adequate	1	6.7	50.0
III (N = 32)	More than adequate	3	9.4	65.0
	Adequate	25	78.1	70.8
	Not adequate	4	12.5	67.5
I, II, and III (N = 125)	More than adequate	21	16.8	N/A**
	Adequate	95	76.0	
	Not adequate	9	7.2	

*Only respondents who used shorthand on the job are included in this table.

**Average marks for Shorthand 20 and Shorthand 30 were not combined.

USE AND EVALUATION OF HIGH SCHOOL TRAINING IN DICTATION MACHINES

The number and per cent of respondents using dictation machines on the job is given in Table XXII. Approximately 27 per cent (27.4) of the respondents reported use of dictation machines on the last job and approximately 73 per cent (72.6) reported no use of dictation machines on the job. Respondents of Group II reported the lowest percentage of use of dictation machines on the job (17.2 per cent).

The number and per cent of respondents using dictation machines on the job in terms of fractions of the working day is given in Table XXIII. Of the fifty-seven respondents who used dictation machines on the job and reported use in terms of fractions of the working day, 33.3 per cent reported using dictation machines for one-half or more of the working day; whereas 66.7 per cent reported using dictation machines for one-quarter or less of the working day. Only one respondent reported using the dictation machine for the complete working day.

Ratings of high school dictation machine preparation by respondents who have used dictation machines on the job is given in Table XXIV. Approximately 67 per cent (67.3) of the respondents reported their preparation as adequate or more than adequate for use on the job; approximately 13 per cent (12.7) of the respondents reported their high school preparation as inadequate; and 20.0 per cent reported no high school dictation machine preparation.

TABLE XXII
REPORTED USE OF DICTATION MACHINES ON THE JOB

Use or Non-Use of Dictation Machines	Group I (N = 114) Number Per Cent	Group II (N = 29) Number Per Cent	Group III (N = 76) Number Per Cent	All Groups (N = 219) Number Per Cent
Use	33 28.9	5 17.2	22 28.9	60 27.4
Non-use	81 71.1	24 82.8	54 71.1	159 72.6

TABLE XXIII
THE REPORTED USE OF DICTATION MACHINES ON THE JOB
IN TERMS OF FRACTIONS OF THE WORKING DAY

Fractions of the Working Day	Group I (N = 33) Number Per Cent	Group II (N = 4) Number Per Cent	Group III (N = 20) Number Per Cent	All Groups (N = 57)* Number Per Cent
All the day	1 3.0	0 0	0 0	1 1.8
Three-quarters of the day	4 12.1	1 25.0	5 25.0	10 17.5
One-half of the day	3 9.1	1 25.0	4 20.0	8 14.0
One-quarter of the day	5 15.2	0 0	3 15.0	8 14.0
Less than one-quarter of the day	20 60.6	2 50.0	8 40.0	30 52.6
One-half of the day or more	8 24.3	2 50.0	9 45.0	19 33.3
One-quarter or less of the day	25 75.8	2 50.0	11 55.0	38 66.7

*Three respondents who reported use of dictation machines on the job failed to indicate the use in terms of fractions of the working day.

TABLE XXIV

RATINGS OF HIGH SCHOOL DICTATION MACHINE PREPARATION BY
RESPONDENTS WHO USED DICTATION MACHINES ON THE JOB

Rating	Group I (N = 31)		Group II (N = 4)		Group III (N = 20)		All Groups (N = 55)	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
More than adequate	1	3.2	0	0	5	25.0	6	10.9
Adequate	20	64.5	3	75.0	8	40.0	31	56.4
Not adequate	6	19.4	1	25.0	0	0	7	12.7
No training received	4	12.9	0	0	7	25.0	11	20.0

USE OF SHORTHAND COMPARED WITH USE OF DICTATION MACHINES

Respondents' use of shorthand compared with use of dictation machines is given in Table XXV. Machines were used exclusively by 8.7 per cent of the respondents; whereas shorthand was used exclusively by 37.4 per cent of the respondents. The largest percentage of respondents who used machines exclusively were included in Group III; whereas the largest percentage who used shorthand exclusively were included in Group I. The combined responses of the three groups indicate that 36.1 per cent of the respondents used neither dictation machines nor shorthand on the job.

In the section of the questionnaire reserved for general comments, respondents expressed opinions concerning the use of shorthand and dictation machines on the job. The comments were summarized as follows:

1. Sixty-five respondents stated that shorthand has definite value on the job or when applying for a job.
2. Twenty-nine respondents indicated that shorthand is being used little or not at all on the present job, but future plans call for a job requiring the use of shorthand.
3. Eleven respondents believed that shorthand is being replaced by dictation machines in offices generally.

TABLE XXV

RESPONDENTS' USE OF SHORTHAND COMPARED WITH THE
USE OF DICTATION MACHINES

Use of Dictation Machines and/or Shorthand	Group I (N = 114)		Group II (N = 28)		Group III (N = 77)		All Groups (N = 219)*	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Shorthand exclusively	51	44.7	11	39.3	20	26.0	82	37.4
Machines exclusively	6	5.3	2	7.1	11	14.3	19	8.7
Both machines and shorthand	26	22.8	3	10.7	10	13.0	39	17.8
Neither Machines nor shorthand	31	27.2	12	42.9	36	46.8	79	36.1

*Four persons who reported use of shorthand on the job failed to report whether or not dictation machines were also used. Two persons who reported use of dictation machines failed to report whether or not shorthand was also used.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate students' reasons for electing shorthand in high school and to identify the advantages, if any, accruing to students who have completed courses in shorthand. Specifically, an attempt was made to obtain answers to the twelve questions which appear in Chapter I. Data were obtained from the student record cards of the Alberta Department of Education files and from a questionnaire sent to former high school shorthand students who had worked in offices for approximately eleven months. Three hundred and forty-six former students were contacted and 270 or 83.3 per cent completed and returned the questionnaires. The respondents were divided into non-graduates, and graduates which were further divided according to two or three years of shorthand preparation in high school. Employing firms were classified according to industry for the purpose of reporting average salary and numbers employed; salaries and numbers of respondents employed were further divided into urban and non-urban regions. Responses to each item of the questionnaire were summarized in terms of averages and percentages.

SUMMARY OF FINDINGS

The results of the study are summarized and presented according to five major divisions and appear in the following section.

I. Employment of Respondents According to Classification of Industry

Two hundred and forty or 88.9 per cent of the respondents had worked at a permanent office job after leaving high school. Of the 30 respondents who did not obtain permanent office jobs, 19 or 63.3 per cent proceeded to further education. Included in the nineteen were nine graduates with only two years of high school shorthand.

Transportation, Communication, and Other Utilities; Insurance and Real Estate; Provincial Government; and Banks and Treasury Branches were the four classifications of industry which employed 50.4 per cent of the respondents on their first jobs.

Respondents in the urban areas (the two largest cities of Alberta) reported higher average salaries than respondents in non-urban areas (excluding the two largest cities). The urban beginning average salary was \$25.98 higher than the non-urban beginning average salary, and the urban average salary after six months' employment was \$33.40 higher than the non-urban average salary after six months' employment. Most of the respondents (86.3 per cent) were working in the urban areas of Alberta.

Classifications of industry in urban areas with the highest average salaries were Federal Government; Local Government; Transportation, Communication, and Other Utilities; and Oil and Oil Service.

Comparisons among the three groups showed that average salaries were highest for Group I (graduates with three years of shorthand), and progressively lower for Group II (non-graduates with three years of shorthand), and for Group III (graduates with only two years of shorthand).

II. Respondents' Reasons for Electing Shorthand in High School

The desire to get a better and more interesting job was listed by 74.6 per cent as the most important reason for electing shorthand in high school. The influence of a teacher or guidance counsellor was listed as the most important reason for electing shorthand in high school by 15.2 per cent of the respondents. The requirement of shorthand in the students' program was listed as the most important reason for electing shorthand in high school by 6.2 per cent of the respondents.

III. Respondents' Use and Evaluation of High School Training in Shorthand

Shorthand was used on the job by 53 per cent of the respondents. Approximately 21 per cent (21.2) of the respondents were not using shorthand on the job but felt that shorthand helped them in obtaining a job. Only 25.8 per cent of the respondents indicated that shorthand was of no use to them either on the job or as an aid in obtaining a job. Almost 40 per cent (39.5) of the respondents with two years of shorthand were using shorthand on the job.

Of the respondents who tried to obtain a job using shorthand, 66.8 per cent were using shorthand on the job; whereas 33.2 per cent were not. Of the respondents who did not try to obtain a job using shorthand, 14.3 per cent were using shorthand on the job; whereas 85.7 per cent were not. Approximately 76 per cent (76.3) of the respondents of Group I (graduates with three years of shorthand), who tried to obtain a job using shorthand were successful.

Most of the respondents (70.4 per cent) reported use of shorthand on the job for one-quarter or less of the working day; whereas 29.6 per cent reported use of shorthand on the job for one-half or more of the working day. Group III (graduates with two years of shorthand) included the largest percentage (46.9) of the respondents who reported use of shorthand on the job for one-half or more of the working day.

Average salaries for employees in jobs requiring the use of shorthand were higher than average salaries in jobs not requiring the use of shorthand. In the case of beginning salary, the average was \$14.35 higher; in the case of salary after six months' employment, the average was \$17.22 higher. For Group II, the data showed the greatest difference between average salary of employees in jobs requiring the use of shorthand. In the case of beginning salary, the average was \$20.80 higher; in the case of salary after six months' employment, the average was \$18.64 higher.

For each of the three groups, the average final marks for respondents who used shorthand on the job were consistently higher than average final marks for respondents who did not use shorthand on the job.

Approximately 93 per cent (92.8) of the respondents reported that their high school preparation in shorthand was either adequate or more than adequate for use on the job. Of the respondents included in Groups I and II, the average final mark in shorthand was highest for those who assessed their high school shorthand preparation as

more than adequate and lowest for those who assessed their high school preparation as not adequate.

IV. Respondents' Use and Evaluation of High School Preparation in Dictation Machines

A small percentage (27.4) of the respondents reported the use of dictation machines on the job. One-third reported use of dictation machines on the job for one-half or more of the working day, and two-thirds reported use for one-quarter or less of the working day. Six or 10.9 per cent of the respondents assessed high school preparation in dictation machines as more than adequate for use on the job, 21 or 56.4 per cent assessed the preparation as adequate, and 7 or 12.7 per cent assessed the preparation as inadequate. Eleven or 20 per cent reported no preparation in dictation machines.

V. Use of Shorthand Compared with Use of Dictation Machines

Shorthand was used exclusively on the job by 37.4 per cent of the respondents, whereas dictation machines were used exclusively by 8.7 per cent. The largest percentage of respondents who used machines exclusively (14.3 per cent) were included in Group III; the largest percentage who used shorthand exclusively (44.7 per cent) were included in Group I. Seventy-nine or 36.1 per cent of the respondents reported that they had used neither shorthand nor dictation machines on the job. Sixty-five respondents stated that shorthand had definitely been valuable to them, 29 stated that shorthand was not being used but might be used in the future and 11 stated that they felt shorthand was being replaced by dictation machines.

CONCLUSIONS

The conclusions which can be derived from this study are as follows:

1. Most of the students with high school preparation in shorthand obtained office jobs after leaving high school.
2. In Alberta, the largest number of students employed directly from high school were in the offices of public utility companies, the Provincial Government, insurance and real estate companies, and banks and Treasury Branches.
3. For beginning office workers with shorthand preparation in high school, average salaries in the two largest cities of Alberta were higher than those in the area excluding the two cities.
4. For beginning office workers with high school shorthand preparation, the highest average salaries were provided by government, oil and oil service companies, and public utility companies.
5. In the two largest cities of Alberta, graduates with three years of high school shorthand preparation received higher average beginning office salaries than non-graduates with three years of high school shorthand preparation; graduates with three years of high school shorthand preparation received higher average beginning office salaries than graduates with two years of high school shorthand preparation.
6. During their first year of employment, office employees who used their high school shorthand vocationally earned higher salaries, generally, than those who did not use high school shorthand vocationally.

7. High school shorthand preparation was being used on the job.
Many beginning stenographers who did not use shorthand on the job considered shorthand skill a factor in obtaining the job.
8. Jobs requiring the use of shorthand were available to most students who tried to obtain such jobs after leaving high school.
9. There was a wide variation in the daily use of shorthand by beginning stenographers; however, most beginning stenographers used shorthand for one-quarter or less of the working day.
10. Most former students who have successfully completed two or three years of high school shorthand, elected to take shorthand because of a desire to obtain an interesting job.
11. Some students were advised to take shorthand by a teacher or guidance counsellor; others were required to take shorthand because it was part of the program selected.
12. The probability of high school students using their shorthand on the job tends to vary directly with the degree of skill acquired as measured by the teacher's final shorthand mark in high school.
13. High school shorthand preparation was adequate for most beginning stenographers. This conclusion is supported by the finding that only 7.2 per cent of the respondents who used shorthand on the job assessed their high school preparation in shorthand as inadequate for vocational use.
14. For some beginning stenographers, two years of high school shorthand preparation were adequate for use on the job. This conclusion is supported by the finding that of 32 graduates (39.5 per cent of the respondents) who used shorthand on the job, 87.5 per cent

assessed their high school preparation in shorthand as adequate or more than adequate for use on the job.

15. Dictation machines were not widely used by beginning office workers who had received shorthand preparation in high school.
16. Not all high schools offer sufficient preparation in the use of dictation machines.
17. Most beginning stenographers used both shorthand and dictation machines in the office; however, many beginning stenographers used shorthand exclusively.

RECOMMENDATIONS

The results of this study suggest the following recommendations:

1. Consideration should be given to offering more two-year programs in high schools for capable students.
2. High schools should prepare shorthand students in the use of dictation machines.
3. A study is needed to determine why employers demand shorthand skill when it is apparently not their intention to provide the opportunity for the employee to use the skill.
4. As teachers' final marks in shorthand were used as an indication of shorthand skill, a study is needed to determine the relationship between teachers' marks and shorthand skill on the job.
5. A study is needed to investigate why students who dropped out of shorthand elected to study shorthand.
6. A comparative study of salaries for users of shorthand and non-users of shorthand should be undertaken.

7. A longitudinal study is needed to determine trends in the use of shorthand and/or dictation machines for transcription purposes.
8. Because the number of high schools in Alberta offering shorthand increased substantially in 1963, a follow-up study of the students who began shorthand in 1963 should be undertaken for the purpose of determining the availability of beginning stenographic positions.
9. A study of employers' evaluation of high school shorthand should be undertaken.

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APPENDIX

15810 - 94A Ave.
Edmonton, Alberta

May 14, 1964

Dear _____:

You have been a shorthand student in high school and are now in a position to give information which will help students in high school who are enrolled or are intending to enrol in a shorthand course. With your help, I propose to do a province-wide survey in an attempt to answer several very important questions.

During your study of shorthand in high school, you or your friends have likely asked these questions:

"Will I be able to get a job using my shorthand?"

"Do office workers who use shorthand earn more money than straight typists?"

"Will shorthand be required for a good job even though I won't be expected to use it?"

"Is shorthand 'on the way out' and being replaced by dictation machines?"

Do these questions sound familiar?

You have succeeded in your shorthand study and can now answer these questions for the benefit of others. These and other questions are asked on the enclosed questionnaire. When all replies are put together and tabulated, some fairly accurate answers should appear. This information will then be used to help students who are enrolled or are intending to enrol in the business education programs of the high schools.

Kindly fill in the enclosed questionnaire at your earliest convenience and return it in the enclosed self-addressed envelope. It is necessary that your name appear on the questionnaire but replies will be kept in strict confidence. If you wish to have a summary of results, enclose a note to that effect and I will be pleased to send this information to you when it is complete.

Yours sincerely,

Leo S. Dawson, Graduate Student
Department of Secondary Education
University of Alberta

Enclosure

QUESTIONNAIRE

Name: Miss ()
Mrs. ()
Mr. ()

A. Have you worked in an office since you left high school? Yes () No ()

If you answered "Yes", please complete this section.

(1) How long have you worked in an office?

_____ months

(2) Are you working in an office now?

Yes () No ()

(3) Did you try to get a job where your shorthand would be used?

Yes () No ()

If you answered "No", please complete this section.

Indicate the single, most important reason why you have not had a job.

(1) I married immediately after graduation. ()

(2) I decided to take more education. ()

(3) I was unable to get a job. ()

(4) Other reason (Please specify) ()

B. Why did you decide to study shorthand? Indicate the reason below. If there was a single reason, use a check (✓); if there were several reasons, use numbers [(1), (2), (3), etc.] to show the order of importance.

(1) I hoped to obtain a better and more interesting job as the result of my shorthand education. ()

(2) I thought that shorthand was an easy subject. ()

(3) A teacher or guidance counsellor suggested that the stenographic program would be best for me. ()

(4) My parents wanted me to take shorthand. ()

(5) A friend persuaded me to take shorthand. ()

(6) I had no choice because shorthand was required in the program which I selected. ()

(7) Other reason (specify below) ()

(Other reason)

C. Please complete the following table as far as it applies to you.

Name and location of firm for which you have worked or are working	City or town	Length of time employed	Starting salary	Salary last received
--------------------------------------------------------------------	--------------	-------------------------	-----------------	----------------------

(first firm)		(months)	(per month)	(per month)
--------------	--	----------	-------------	-------------

(second firm)				
---------------	--	--	--	--

(third firm)				
--------------	--	--	--	--

THESE QUESTIONS APPLY TO YOUR PRESENT POSITION OR TO YOUR LAST POSITION
IF YOU ARE NO LONGER WORKING

D. Do (Did) you write shorthand on the job? Yes () No ()

If you checked "Yes", complete this section.

(1) Approximately how much of your working day is (was) spent taking dictation and transcribing shorthand notes?

All the working day ()
3/4 of the working day ()
1/2 of the working day ()
1/4 of the working day ()
Less than 1/4 of the working day ()

(2) How do you rate the shorthand training you received in high school?

adequate ()
not adequate ()
more than adequate ()

If you checked "No", complete this section.

(1) Was the ability to write shorthand a stated requirement for initial employment?

Yes () No ()

(2) If you checked "No", do you feel that the ability to write shorthand helped you to secure the position?

Yes () No ()

Comment: _____

E. Are (Were) you required to transcribe from a dictation machine? (These may also be referred to as dictating-machines, voice-writing machines, transcription machines, Dictaphones, Stenographs, etc.)

Yes () No ()

(1) How much of your working is (was) spent transcribing from a machine?

All the working day ()
3/4 of the working day ()
1/2 of the working day ()
1/4 of the working day ()
Less than 1/4 of the working day ()

(2) Did you receive any training in the use of dictation machines in high school?

Yes () No ()

(3) How do you rate the training you received in the use of dictation machines?

adequate ()
not adequate ()
more than adequate ()

Comments: _____

General comments: _____

15810 - 94A Ave.

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Edmonton, Alberta

June 6, 1964

To former high school shorthand students:

I hope you have received my letter and enclosed questionnaire which was mailed to you about ten days ago.

Because of the difficulty of locating former students, I would like to ask you to return your questionnaire as soon as possible so that I will know whether or not you have been reached. I would certainly appreciate comments, but if you do not have time, just give your name and check the appropriate places. If you have changed your name through marriage, please include your former name.

I am asking for your firm's name, your starting salary and salary after first raise so that students presently enrolled in high school will have an idea of what types of firms they may expect to work for as beginners and the salaries they may expect to receive. This information will not be associated with your name in the study and you are the only source of my information concerning salaries. Firms will not be contacted.

You may have mailed the questionnaire already and if so, please accept my thanks and ignore this letter.

15810 - 94A Ave.
Edmonton, Alberta

June 15, 1964

Dear

About twenty days ago, I sent you a questionnaire concerning the use of your high school stenographic training in your present job. I am enclosing a duplicate questionnaire for your use in case you have mislaid the original one.

You are an important person in this study! Success or failure of the high school business programs can best be rated by people like yourself. How do you feel about your high school stenographic training? Has it been valuable to you in your office work? If not, how do you think high school business education can be improved? This is the kind of information future students and teachers in business education need to know.

Please take five minutes to fill in all or part of the questionnaire. Comments are much appreciated as they provide valuable information about the job possibilities of the beginning office worker. If you have already sent your questionnaire, please put your name (maiden name if married) on the duplicate questionnaire and send it back to me. Thank you for your participation in this study.

15810 - 94A Ave.
Edmonton, Alberta

June 26, 1964

Former students have told me that the world of work is certainly a lot different from what they had anticipated during high school. Do you find this to be true?

Students in grades IX and X should be told what to expect by their teachers and guidance counsellors. The study which I am doing is designed with this purpose in mind. You and the other graduates of the high school stenographic programs can best give this information.

I have tried to contact 350 people during this study and, so far, about 75% have responded. Not very many have indicated that they are definitely not interested in participating and this has led me to believe that most of the other 25% have been putting off replying for some reason or another.

If you do not wish to respond, this is quite understandable, but please let me know in some way. I am typing your name on the corner of the questionnaire so that you can be identified. If you do not wish to give any information, simply return the questionnaire. Otherwise, I would be most appreciative of any information that you are willing to give.

I wish to thank you in advance for cooperating and hope that you will return the questionnaire to me as soon as possible.

Yours truly,

L. S. Dawson, Graduate Student
University of Alberta

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